# QGP Brick: What to do next?

Redesign comparison schemes:

- ΔE Scheme:
  - Keep $\Delta E / E = \int dx \, x \, P(x)$ fixed
  - Intuitive, but overemphasizes poorly controlled x→1 region

- R scheme:

$$R(p) = \frac{\int dx dz f\left(\frac{p}{(1-x)z}\right) D(z) P(x)}{\int dx dz f\left(\frac{p}{z}\right) D(z)} \longrightarrow \int dx (1-x)^n P(x)$$

  - Strongly underweights x→1 region

- Compare directly R_{AA} with correct hadronization

- **WHDG and AMY are directly comparable:**

  ▸ Calculations can be done for same E, L, T, α_s. Compare the same observables in the same figure.

  ▸ Make sure that apples are compared with apples: gluon medium only, check whether groups agree on q-hat (i.e. λ and μ^2).
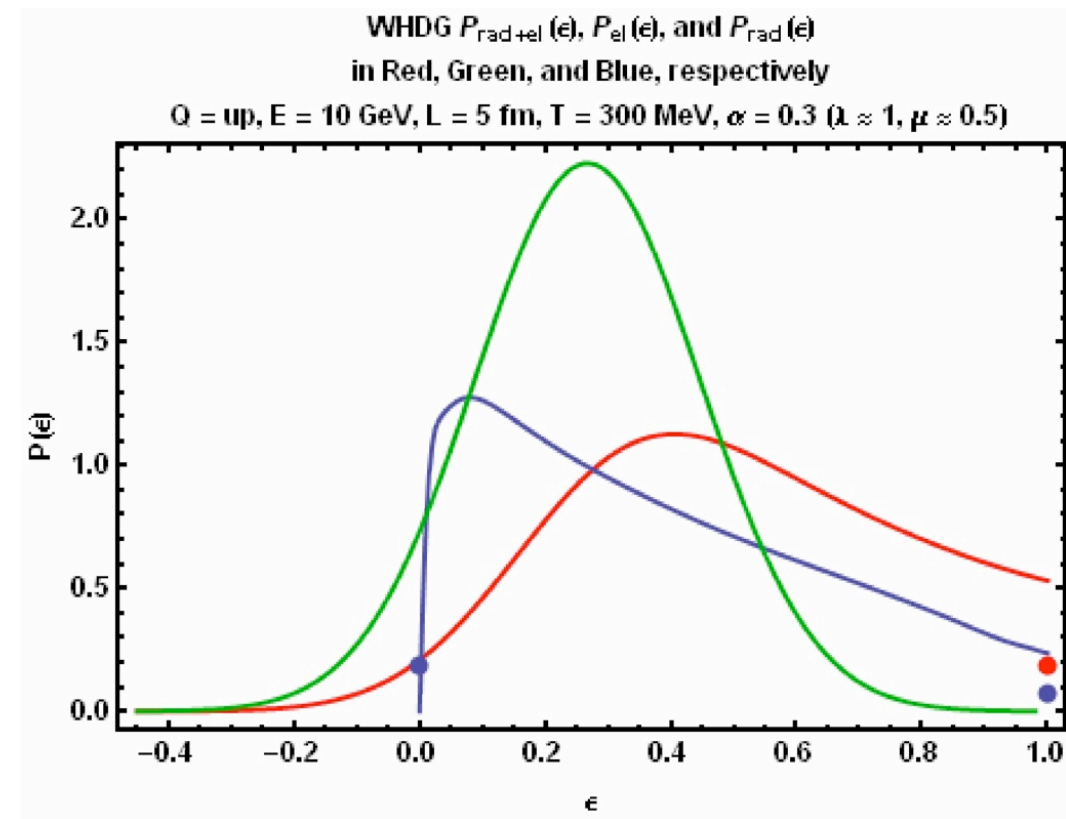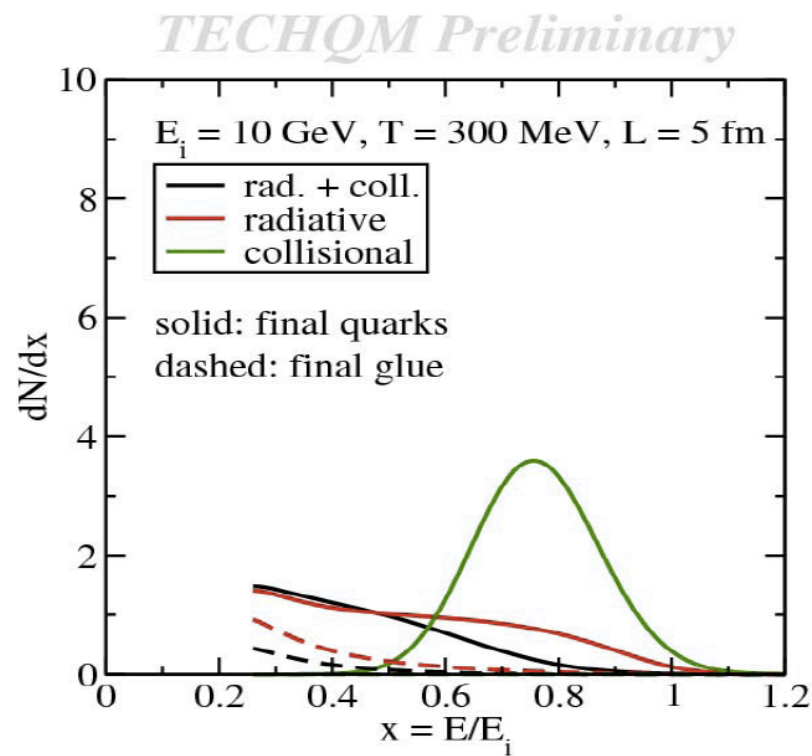
- **WHDG and ASW are directly comparable:**

  ▸ Calculations can be done for same E, L, α_s.

  ▸ Compare in ΔE and in R schemes, and after R_{AA} after fragmentation.

  ▸ Compare q-hat leading to same ΔE, R.

  ▸ Compare R for same q-hat.

  ▸ Explore, if x(1-x) kinematic constraint can be implemented in ASW.
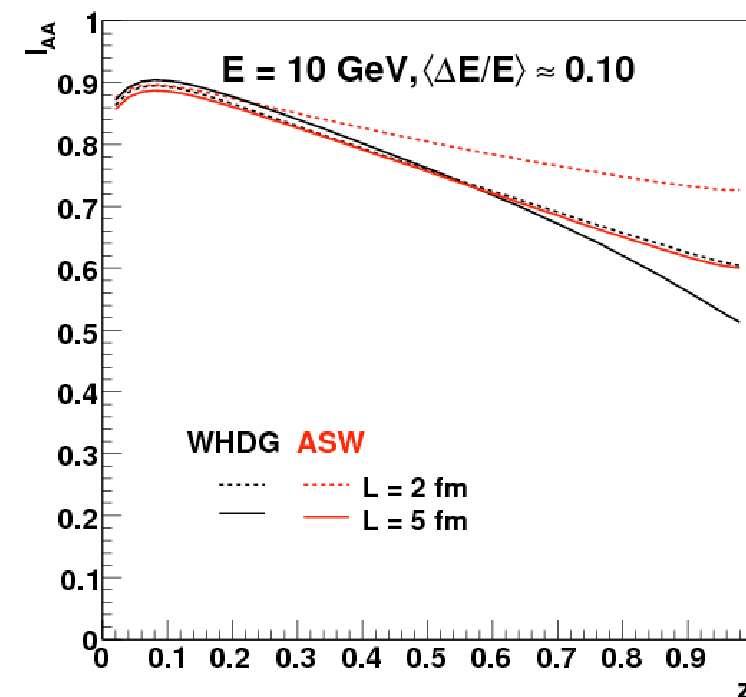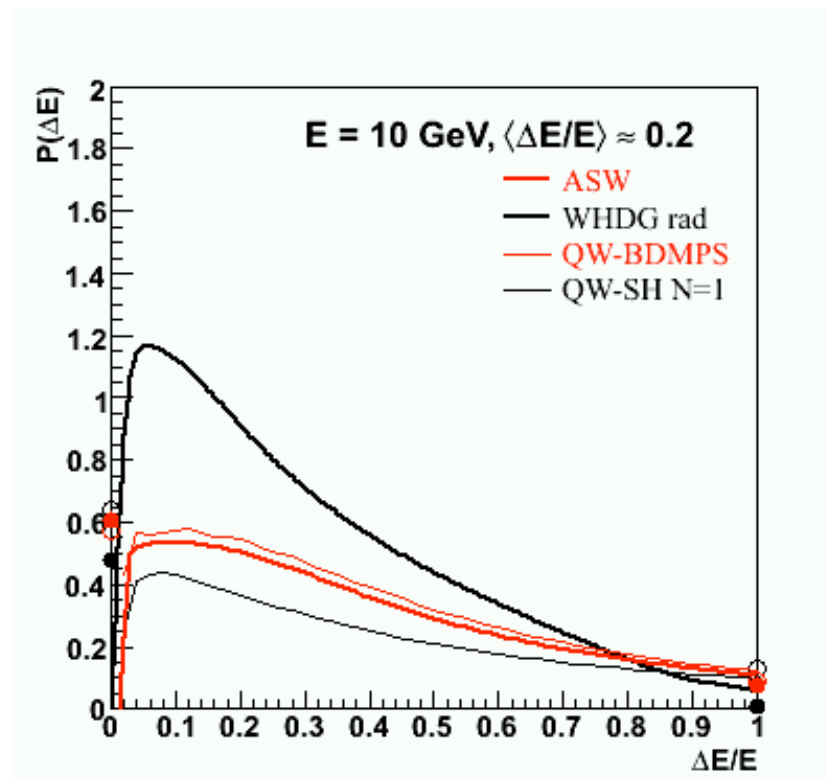
HT, AMY and WHDG are comparable:

▶ Calculations can be done for same E, L, α_s, q-hat.

▶ Compare R_{AA} after fragmentation.

▶ Fix R_{AA} and compare q-hat for same E, L, α_s.